

# An Analysis of Surveys Regarding Absentee Ballots Across Several States

William M. Briggs

November 23, 2020

## 1 Summary

Survey data was collected from individuals in several states, sampling those who the states listed as not returning absentee ballots. The data was provided by Matt Braynard.

The survey asked respondents whether they (a) had ever requested an absentee ballot, and, if so, (b) whether they had in fact returned this ballot. From this sample I produce predictions of the total numbers of: **Error #1**, those who were recorded as receiving absentee ballots *without* requesting them; and **Error #2**, those who returned absentee ballots but whose votes went missing (i.e. marked as unreturned).

The sizes of both errors were large in each state. The states were Georgia, Michigan, Wisconsin, and Arizona where ballots were across parties. Pennsylvania data was for Republicans only.

## 2 Analysis Description

Each analysis was carried out separately for each state. The analysis used (a) the number of absentee ballots recorded as unreturned, (b) the total responding to the survey, (c) the total of those saying they did not request a ballot, (d) the total of those saying they did request a ballot, and of these (e) the number saying they returned their ballots. I assume survey respondents are representative and the data is accurate.

From these data a simple parameter-free predictive model was used to calculate the probability of all possible outcomes. Pictures of these probabilities were derived, and the 95% prediction interval of the relevant numbers was calculated. The pictures appear in the Appendix at the end. They are summarized here with their 95% prediction intervals.

**Error #1:** being recorded as sent an absentee ballot without requesting one.

**Error #2:** sending back an absentee ballot and having it recorded as not returned.

State	Unreturned ballots	Error #1	Error #2
Georgia	138,029	16,938–22,771	31,559–38,866
Michigan	139,190	29,611–36,529	27,928–34,710
Pennsylvania*	165,412	32,414–37,444	26,954–31,643
Wisconsin	96,771	16,316–19,273	13,991–16,757
Arizona	518,560	208,333–229,937	78,714–94,975

\*Number for Pennsylvania represent Republican ballots only.

Ballots that were not requested, and ballots returned and marked as not returned were classed as *troublesome*. The estimated average number of troublesome ballots for each state were then calculated using the table above and are presented next.

State	Unreturned ballots	Estimated average troublesome ballots	Percent
Georgia	138,029	53,489	39%
Michigan	139,190	62,517	45%
Pennsylvania*	165,412	61,780	37%
Wisconsin	96,771	29,594	31%
Arizona	518,560	303,305	58%

\*Number for Pennsylvania represent Republican ballots only.

## 3 Conclusion

There are clearly a large number of troublesome ballots in each state investigated. Ballots marked as not returned that were never requested are clearly an error of some kind. The error is not small as a percent of the total recorded unreturned ballots.

Ballots sent back and unrecorded is a separate error. These represent votes that have gone missing, a serious mistake. The number of these missing ballots is also large in each state.

Survey respondents were not asked if they received an unrequested ballot whether they sent these ballots back. This is clearly a lively possibility, and represents a third possible source of error, including the potential of voting twice (once by absentee and once at the polls). No estimates or likelihood can be calculated for this potential error due to absence of data.

## 4 Declaration of William M. Briggs, PhD

1. My name is William M. Briggs. I am over 18 years of age and am competent to testify in this action. All of the facts stated herein are true and based on my personal knowledge.
2. I received a Ph.D of Statistics from Cornell University in 2004.
3. I am currently a statistical consultant. I make this declaration in my personal capacity.
4. I have analyzed data regarding responses to questions relating to mail ballot requests, returns and related issues.
5. I attest to a reasonable degree of professional certainty that the resulting analysis are accurate.

I declare under the penalty of perjury that the foregoing is true and correct.



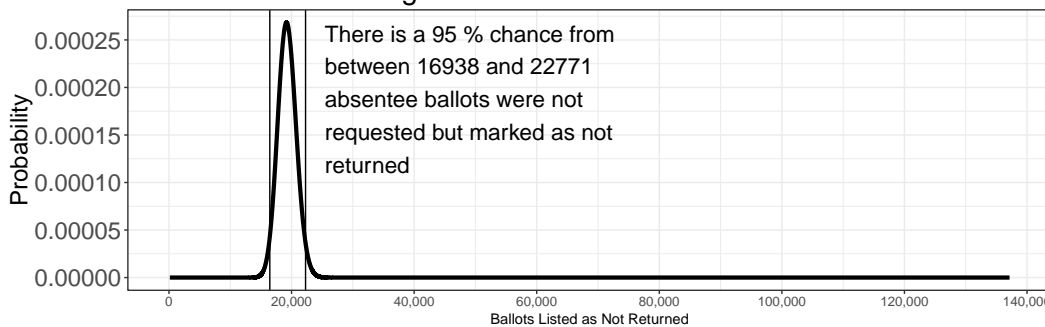
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William M. Briggs

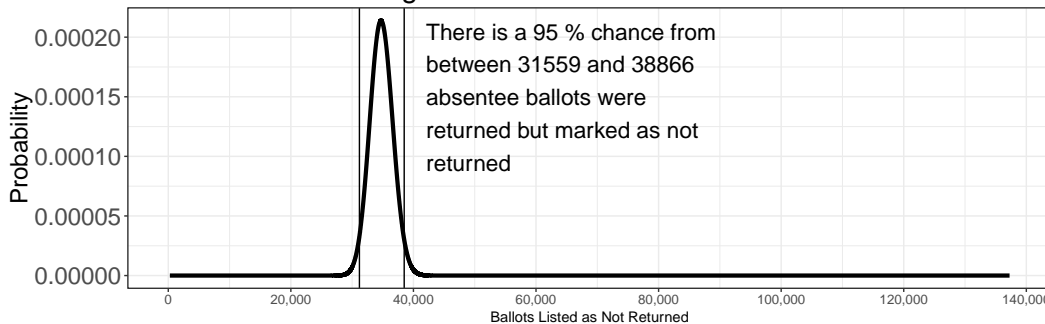
## 5 Appendix

The probability pictures for each state for each outcome as mentioned above.

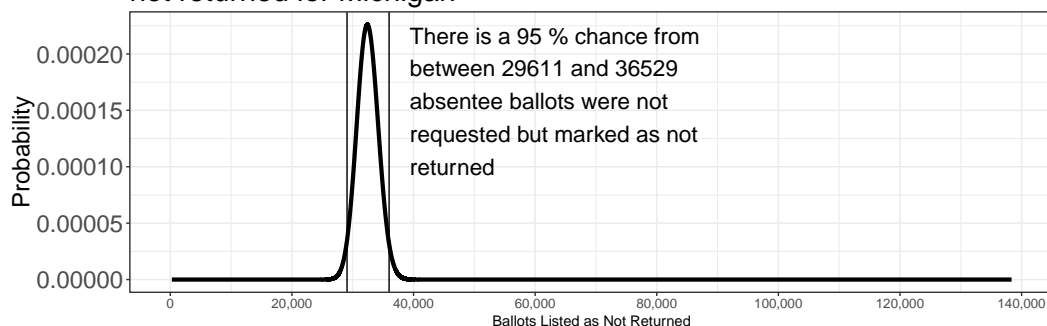
**Probability of numbers of un-requested absentee ballots listed as not returned for Georgia**



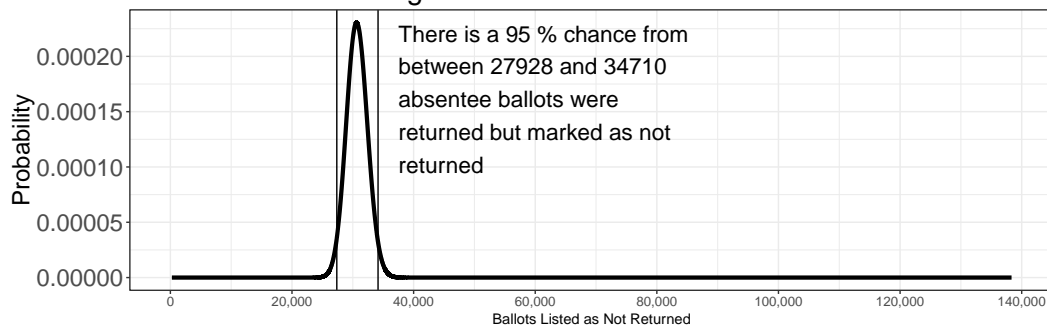
**Probability of numbers of absentee ballots returned but listed as not returned for Georgia**



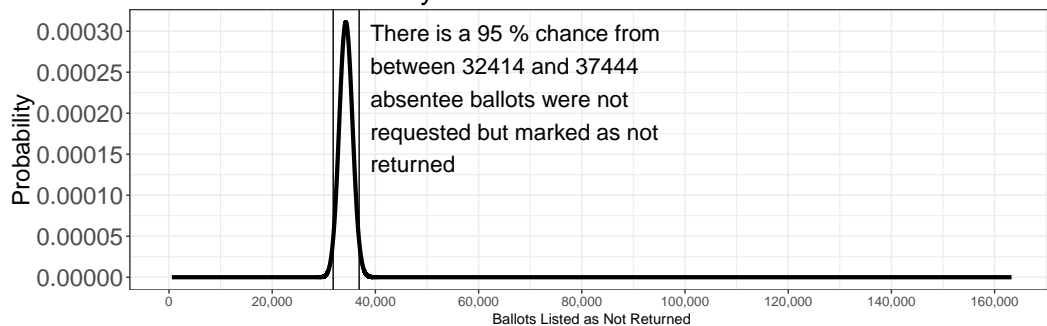
Probability of numbers of un-requested absentee ballots listed as not returned for Michigan



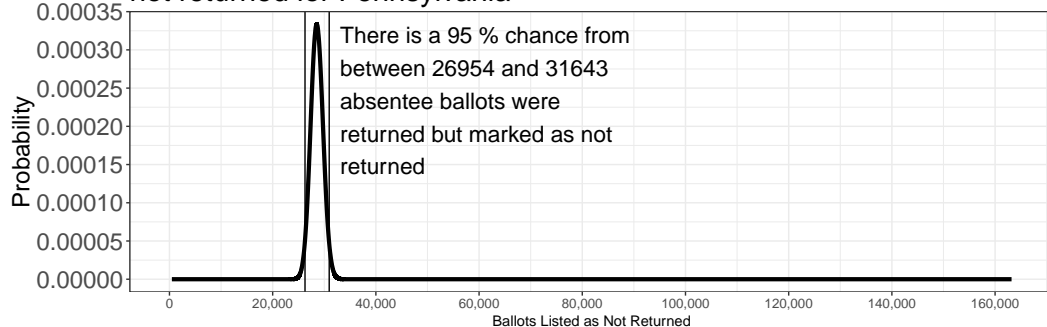
Probability of numbers of absentee ballots returned but listed as not returned for Michigan



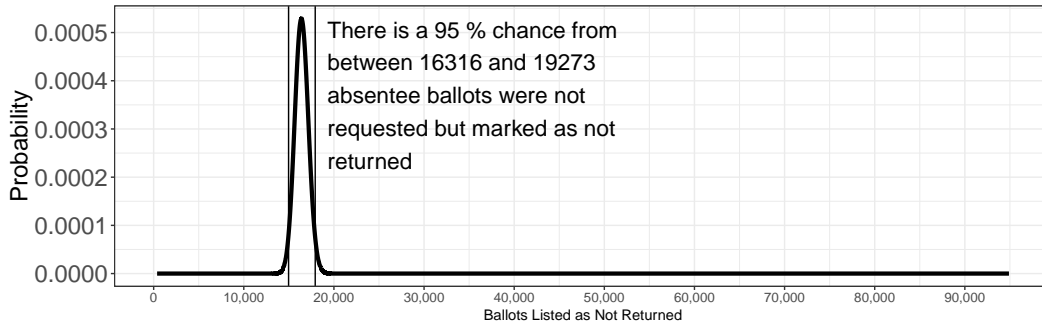
Probability of numbers of un-requested absentee ballots listed as not returned for Pennsylvania



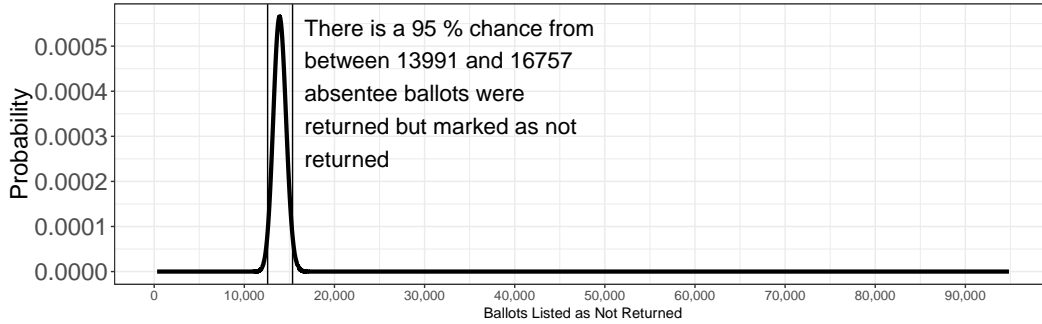
Probability of numbers of absentee ballots returned but listed as not returned for Pennsylvania



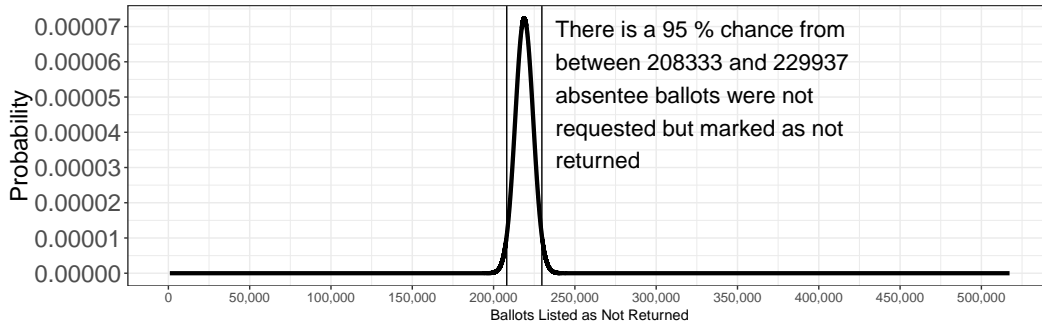
Probability of numbers of un-requested absentee ballots listed as not returned for Wisconsin



Probability of numbers of absentee ballots returned but listed as not returned for Wisconsin



Probability of numbers of un-requested absentee ballots listed as not returned for Arizona



Probability of numbers of absentee ballots returned but listed as not returned for Arizona

